

TRANSPORTATION

At a Glance

Gasoline consumed for transportation
1980. . . 1.6 billion gal.
1990. . . 1.7 billion gal.
1999. . . 2.1 billion gal.

Number of vehicles registered in Kentucky
1970 1.8 million
1980 2.7 million
1990 2.9 million
2000 3.4 million

Average number of miles driven per person in Kentucky
1970. 6,210
1989. 9,217
1999. 12,072

Indicator 3. Energy and Transportation

Background Transportation accounts for 24 percent of all energy used in the state. Kentuckians consumed 2.1 billion gallons of gasoline for transportation activities in 1999, an increase of 20 percent since 1990. This short-term rise is typical of a long-term trend that reflects a 51 percent increase in gasoline consumption since 1970.

Goal Provide for the Commonwealth's energy needs in the most efficient and cost-effective way possible while protecting the environment and conserving our natural resources.

Progress The number of passenger vehicles registered with the state has increased 86 percent since 1970 and now numbers 3.4 million.¹ According to the Kentucky Transportation Cabinet, Kentuckians have doubled the average number of miles driven each year for personal travel as compared to 1970. In 1999, the average person in Kentucky traveled nearly 12,072 miles. Although the number of miles traveled has increased, the amount of gasoline consumed per vehicle has generally been declining since 1970, a result of improved fuel efficiency of vehicles. However, this trend began to reverse itself in the early 1990s with the

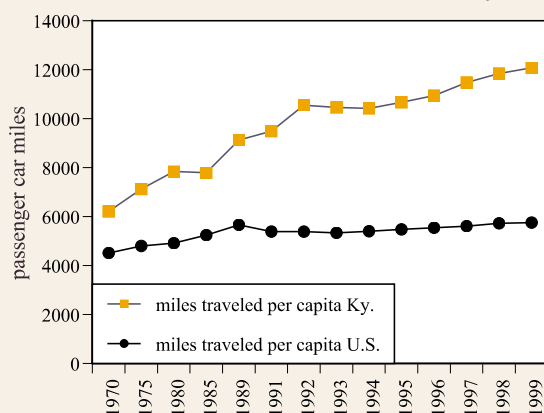
popularity of less fuel-efficient vans, trucks, and sport utility vehicles. This category of vehicles has increased nationwide by 89 percent since 1985.

The use of cleaner, renewable fuels is an important component of federal strategies to curb air pollution, reduce U.S. dependence on foreign oil, and control emissions from burning fossil fuels that are associated with acid rain and global warming. Kentucky now has 33 refueling stations for compressed natural gas, ethanol and liquid propane gas. The U.S. Department of Energy estimates that there are 5,735 alternative-fueled vehicles in the state, an increase of 31 percent over 1998 levels.²

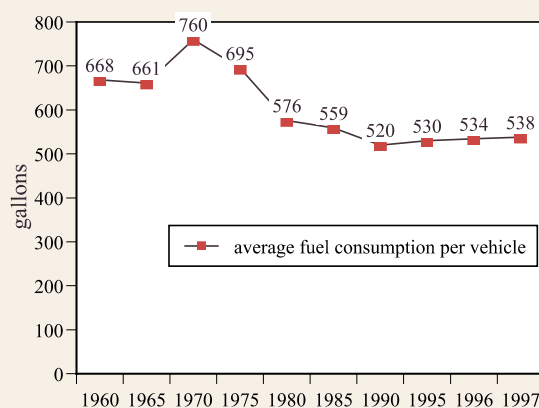
The national Energy Policy Act of 1992 requires state fleets to purchase vehicles powered by alternative fuels such as ethanol, methanol, natural gas, propane, electricity or biofuels. As of 2000, 75 percent of all new state government fleet purchases are alternatively fueled vehicles. The Kentucky Division of Energy has recommended the state apply these requirements to all state vehicle purchases.

The nationwide use of ethanol as an alternative fuel has in-

Measure 1. Per Capita Vehicle Miles Traveled in the U.S. and Kentucky



Measure 2. Average Fuel Consumption Per Vehicle in the U.S.



creased 250 percent since 1992.³ However, this is still only a small fraction of the transportation fuels used in the United States. Ethanol is produced from corn and other biomass and is used as a clean burning fuel supplement that is blended with gasoline to produce "gasohol." Gasohol is higher in oxygen content and burns cleaner than gasoline. The American Farm Bureau estimates farmers and other agricultural businesses could increase their earnings annually by as much as \$4.5 billion if ethanol use were significantly expanded.⁴ Approximately 950 Kentucky state government vehicles are capable of operating on a formula of 85 percent ethanol and 15 percent gasoline.⁵ There are currently seven ethanol refueling stations in the state, most of which are in central Kentucky and Louisville.

A factor that will likely lead to the increased use of ethanol is the removal of Methyl Tertiary Butyl Ether (MTBE) from gasoline. National concerns regarding the use of reformulated gasoline were raised after MTBE—one of two fuel oxygenates used in reformulated gas to help improve air quality—was detected in groundwater. The U.S. Environmental Protection Agency (EPA) classifies MTBE as a possible human carcinogen. Reformulated gasoline with MTBE is used in Louisville and in northern Kentucky. The U.S. EPA has called for a nationwide phase out of MTBE. If MTBE were replaced with ethanol, the demand for ethanol could increase from 1.3 billion gallons in 2000 to 3.2 billion gallons in 2004.⁶ Kentucky has one ethanol plant, which is located in Louisville (Parallel Products makes ethanol from beverage and food waste). The Hopkinsville Elevator Company has applied for a grant to build a new ethanol plant in Hopkinsville.

The *Clean Cities* Program is a national program aimed at reducing air pollution caused by vehicle emissions. The program emphasizes the use of alternative transportation fuels to improve air quality and reduce dependence on imported oil. In 1993, the City of Louisville and Jefferson County created a partnership with local businesses and government agencies to become the nation's 19th "Clean City." The criteria for becoming a "Clean City" includes committing to accelerated use of alternative fuels in fleet vehicles and promoting partnerships to create the infrastructure needed to support alternatively fueled vehicles. There are currently 80 clean cities in the country.

Footnotes

1. *Kentucky Transportation Cabinet, May 4, 2001.*
2. *Alternatives to Traditional Transportation Fuels 1998, Table 3, U.S. Department of Energy.*
3. *U.S. Refueling Site Counts by State and Fuel Type as of November 20, 2000, U.S. Department of Energy, Alternative Fuels Data Center.*
4. "Ethanol Can Help End the Grumbling," by C. David Kelly, *American Farm Bureau Federation*, July 17, 2000.
5. *Ky. Division of Energy, December 2000.*
6. "Ability of the U.S. Ethanol Industry to Replace MTBE," by John Urbanchuk, executive vice president, *AUS Consultants*, March 20, 2000.

Measures - notes and sources

Measure 1. Source: U.S. Department of Transportation, *Highway Statistics Summary and Annual Vehicle Survey*; U.S. Census Bureau.

Measure 2. Source: U.S. Department of Transportation, *Ky. Transportation Cabinet*, U.S. Census Bureau.